EMPLOYEE TRAINING

ROAD MAINTENANCE

…INCLUDING POTHOLE REPAIR, SHOULDER MAINTENANCE, AND DISPOSAL OF ASSOCIATED WASTE AND WASTEWATER

Photo courtesy City of Coon Rapids, MN

East-Metro
Water Resource Education Program

YOU HELP PROTECT OUR WATER

East-Metro
Water Resource Education Program

THE PROBLEM

- Paved streets and road are large impervious surfaces. During rain events, water cannot infiltrate into the soil but runs off into storm drains and ditches, often carrying with it pollution such as heavy metals, oil, bacteria, nutrients and trash.

- Numerous best management practices can be implemented to keep runoff clean and to prevent contaminated runoff from entering lakes and rivers.

Photo by Angie Hong shows "chocolate milk" water pouring into the Mississippi River during a rain event

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Road Maintenance

LOW-COST SOLUTIONS

- Avoid using coal-tar emulsions to seal asphalt surfaces
- Use water-based paints when marking pavement. Mix limited amounts of asphalt or concrete and only enough needed for the job.
- Stockpile resurfacing materials away from streets, storm drains and waterways. Cover material piles with tarps during wet and windy weather.

PAVEMENT MARKING

- Potential pollutant sources for pavement marking include overspray, dust, spills and leaks, sediment, fuel, hydraulic fluid, and oil.
- Prevent these pollutants from entering waterways by:
  - Scheduling pavement marking for dry weather days.
  - Loading and transferring paint away from storm drains.
  - Use drop cloths and drip pans in paint-mixing areas.
  - Properly maintain application equipment.

Photo Credit: www.geveko-markings.com

POT-HOLE REPAIR

- Do not use volatile organic compounds (VOCs) to liquefy asphalt (aka cutback asphalt). This can lead to increased ozone levels, causing air pollution.
- Avoid the use of coal tar emulsions to seal surfaces. Coal tar is a major source of polycylic aromatic hydrocarbon contamination with is toxic to aquatic life and suspected to be a human carcinogen.
- Pre-treat all grader blades, truck beds, tires, asphalt distributors and other equipment and tools with vegetable oil or approved product as a release agent for asphalt. Hand sprayers can be used to apply the vegetable oil.
- Schedule activities for dry weather.

PATCHING, RESURFACING & SEALING

Fill cracks and joints in concrete pavement to prevent moisture from entering and damaging the road. Use the following techniques to minimize environmental impacts:

Photo Credit: www.water.epa.gov

- Clean cracks prior to sealing using a broom or compressed air.
- Stockpile resurfacing materials properly.
- Identify, cover and seal nearby storm drains and maintenance holes prior to repairs. Leave covers in place until activity is complete and sealants have drained or evaporated.
- Clean any debris from covered storm drains or maintenance holes.
- Pre-heat or load hot material away from storm drains.
- Plan activities for a dry day.

CURB & SIDEWALK REPAIR

Curb and sidewalk repair may include the use of a compressor, jackhammer, or sawcutter, and disposal of removed materials. Leaks, spills and concrete washout can result in the release of pollutants such as fuel, hydraulic fluid, oil, sediment, and concrete.

- Be sure to identify and cover storm drains with appropriate materials, such as sand bags or impermeable tarps with aggregate covering, to prevent runoff.

Photo Credit:
http://charmeck.org/

PERMEABLE SURFACES

- Minimizing the use of impervious surfaces will reduce the volume of runoff in a given area and the need for curbing and storm drains. Porous pavement allows rain and snowmelt to pass through, thereby reducing runoff from a site and surrounding areas.
- Permeable pavers may substitute for conventional pavement on parking areas with light traffic, bike lanes, sidewalks, and other areas if the grades, subsoils, drainage and other characteristics such as groundwater flow are suitable.

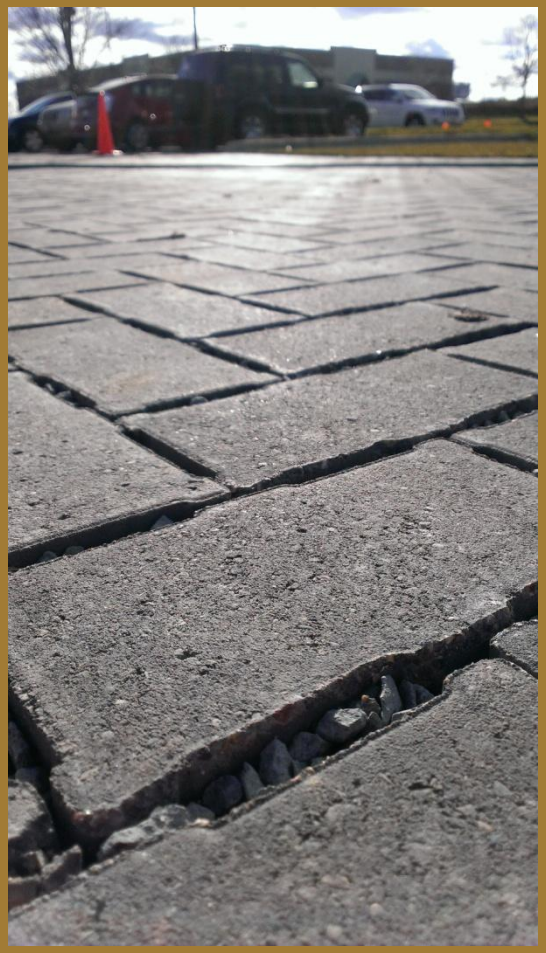

Photo of WCD Permeable Parking Area by Jenn Radtke

QUIZ TIME

1. What is the most appropriate weather condition in which to do street repair activity?
   Answer: A dry day.

2. Paints used for marking pavement should be
   Answer: water-based.

3. What should you do prior to making road repairs to protect clean water?
   Answer: Identify, cover and seal nearby storm drains.

4. What is a benefits of permeable pavers?
   Answer: They allow rain and snow to pass through, reducing runoff from the site.


THANKS FOR HELPING TO PROTECT
OUR WATER RESOURCES!
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